

TECHNICAL REVIEW DOCUMENT
For
RENEWAL of OPERATING PERMIT 99OPWE213

AFCO Steel LLC
Weld County
Source ID 123/0488

Prepared by Matthew S. Burgett
October 2007 – April 2008

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued February 1, 2000, and expired on February 1, 2005. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted February 2, 2004, the April 19, 2008 revision to the application, additional technical information submitted on various dates, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for this renewal permit and any Technical Review Documents associated with the original permit and subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permit associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

AFCO Steel purchases rolled steel plates and shapes and fabricates them into components for bridges, buildings and similar structures. The production operations involve sawing, shearing, flame cutting, hole punching and drilling, fitting the various components together, and joining them into a finished product by bolting or welding. A coat of metal primer or other protective coating may be

applied based on customer requirements. The metal may be prepared for coating by cleaning with a steel shot blast or application of a solvent, or both. The shot blast cleaning operation is equipped with a particulate emissions control device.

Coating is accomplished primarily indoors in large open bays. The large size of the components prohibits the use of a conventional type spray booth. Coating overspray accumulates on the floor area of the coating area. Large fans are provided for ventilation during the cleaning and coating operations. Various solvents, primarily acetone, may be used in preparing the steel for protective coating applications, and for cleaning the coating equipment.

The facility is located in Weld County at 31455 Weld County Road 39 ½, Greeley, Colorado. This area is classified as non-attainment for ozone and is part of the 8-hr Ozone Control Area as defined in Regulation No. 7, Section II.A.16.

Wyoming is an affected state within 50 miles of the plant. Rocky Mountain National Park is a Federal Class I designated area within 100 kilometers of the facility.

NESHAP Applicability

Subpart MMMM – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products:

The effective date of the rule is January 2, 2004 and the compliance date is January 2, 2007. This rule applies to all new and existing affected sources that use 250 gallons per year, or more, of coatings that contain HAPs in the surface coating of miscellaneous metal parts and products; and that is located at a major source of HAP emissions. AFCO Steel is a minor source of HAP emissions and has obtained facility-wide, Federally-enforceable HAP permit limits. Thus, Subpart MMMM does not apply at AFCO Steel.

Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources:

The effective date of the rule is January 9, 2008 and the compliance date is January 10, 2011. This rule applies to all new and existing affected sources at area HAP sources that

- Perform paint stripping using MeCl for the removal of dried paint.
- Perform spray application of coatings to motor vehicles and mobile equipment.
- Perform spray application of coatings that contain the target HAP (Cr, Pb, Mn, Ni, Cd).

AFCO Steel does not perform paint stripping using MeCl, or spray application of coatings to motor vehicles and mobile equipment. In addition, AFCO Steel does not use coatings containing the target HAP. The Operating Permit contains a

limit that does not allow the use of coatings that contain the target HAP. Thus, Subpart HHHHHH does not apply to AFCO Steel.

Compliance Assurance Monitoring (CAM) Applicability

The compliance assurance monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV apply to emission units equipped with control devices that are necessary to meet emission standards. The uncontrolled particulate matter emissions from the shot blast unit exceed 100 ton/yr. The shot blast unit uses a cyclone and cartridge filter to control emissions below 100 ton/yr. As such, a CAM Plan is required. AFCO Steel did not include a CAM Plan with the renewal application. The Division has included a draft CAM Plan in the draft Operating Permit renewal. The draft plan requires a daily visible emission observation when the blast unit is in use, and a weekly pressure drop reading across the control device. The Division inserted the pressure drop requirement in the CAM Plan, but is not aware of the proper pressure drop range in which this unit should operate. AFCO Steel was asked to provide the appropriate pressure drop range for this unit. AFCO Steel states that the manufacturer recommends that the differential pressure drop be kept between 1 and 6 inches water gauge (per letter from ENSR dated June 23, 2008). The Division will include this range in the CAM Plan.

The Division finds the use of visible emission observations to be a valid indicator since an increase in visible emissions would indicate a decrease in efficiency of the control device.

The Division finds the use of control device pressure drop to be a valid indicator since an increase in pressure drop is indicative of control device clogging or decreased permeability. A decrease in pressure drop is indicative of filter failure or leaks.

RACT Applicability

This facility was evaluated to determine if the Reasonably Available Control Technology (RACT) requirement of Regulation No. 3, Part B, III.D.2 would apply. The Regulation states that it applies to “new or modified Minor Sources” in designated nonattainment or attainment/maintenance areas. The area in which this facility is located became nonattainment for ozone on November 20, 2007. This facility would not be considered “new” since it has been in operation prior to the effective date of this applicable requirement (11/20/2007 being the effective date – prior to this date, RACT was not required). There has not been any modification after November 20, 2007 since the facility has not conducted a physical change, or change in the method of operation that increased the emission rate of any pollutant. Thus, RACT was not required for the surface coating operation. RACT would be required upon a modification request.

Regulation No. 7 Applicability

The surface coating operation was evaluated to determine if the Regulation No. 7 requirements for surface coating operations would apply (Regulation No. 7, IX.L – Manufactured Metal Parts and Metal Products). This operation meets the applicability requirements of Reg. 7, IX.L.1.(a).8 since it coats metal products under the SIC code of major group 34. However, Reg. 7, I.A.1.a states that the requirements apply to the Denver 1-hour ozone attainment/maintenance area, and to any non-attainment area for the 1-hour ozone standard. This facility is located outside these areas. Yet, it is located within the 8-hour ozone non-attainment area. Regulation No. 7 will be modified at some point to apply to sources within any ozone non-attainment area. At that point, this facility will be required to meet the requirements of No. 7, IX.L.

Requirements will include:

- Fugitive emission control techniques and work practices (Reg. 7, IX.A.7.a)
- 3.5 lb of solvent VOC per gallon of coating (Reg. 7, IX.L.2.a(3)).

Emissions

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to update the potential to emit based on revisions to permitted emission limits, and to update actual emissions. Emissions (in tons per year) at the facility are as follows:

	PM	PM₁₀	SO_x	NO_x	VOC	CO	HAPs
Coating & cleaning	3.38	3.38			72.4		Any single HAP: 8.0 ton/yr Total HAPs: 20.0 ton/yr
Shot blasting	1.3	1.3					
Actual Emissions (as reported on most recent APENs)							
Coating & cleaning	2.15	2.15			14.5		5.4
Shot blasting	0.11	0.11					

The PTE shown above is based on permit limitations. Actual criteria pollutant emissions are based on the most recent APENs submitted to the Division.

III. Discussion of Modifications Made

Source Requested Modifications

A renewal application was received on February 2, 2004 with the following changes requested:
None.

An application was received on February 23, 2005 with the following changes requested:
Update the legal name of the facility from Platte River Steel to AFCO Steel LLC. This was a name change only, not a transfer of ownership. This change has been incorporated into the renewed permit.

An application was received on April 18, 2008 with the following changes requested:

AFCO has requested Federally-enforceable HAP limits to ensure that they are considered a minor source of HAP emissions. These HAP limits have been included in the renewed permit. AFCO has operated as a minor source of HAP emissions for a number of years. HAP emissions were higher in years past due to the previous use of MEK, which was considered a HAP until 2005.

AFCO has requested permit limits for particulate matter emissions from the surface coating operation. These emissions have not been accounted for in the past. Emissions have been estimated using the transfer efficiency of the spray guns (35%) and a control efficiency allowed for operations in an enclosure (90%). The Division agrees with the use of these parameters in order to estimate particulate emissions. Limits for PM and PM₁₀ emissions associated with surface coating have been included in the permit under Section II.1.

AFCO has requested to list NESHAP Subpart M MMM & Subpart H H H H H H H under Section III of the permit (Permit Shield). The Division has reviewed these Subparts and agrees that they do not apply (see the NESHAP applicability discussion on page 2). The Division has listed these Subparts in Section III.

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

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It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Section I – General Activities and Summary

- The permitted activities description and attainment status of Weld County was updated.
- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.
- In Condition 1.4, General Condition 3.d, & 3.g (new general condition for general provisions) was added as State-only requirements.
- Language changes were made to Condition 3 to more appropriately reflect the status of the source with respect to PSD and NSR.
- Based on comments made by EPA on another operating permit, the phrase "Based on the information provided by the applicant" was added to the beginning of Condition 4.1 (112(r)).
- Added a "new" Section 5 for compliance assurance monitoring (CAM).

Section II – Specific Permit Terms

Section II.1 – Protective Coating and Associated Cleaning Activities

- The table and conditions have been rearranged to reflect current Division language and structure.
- Previous Condition 1.4 has been streamlined into Condition 1.1.

- Previous Condition 1.3 (fugitive VOC control) has been removed from the permit. Regulation No. 7, IX. Does not apply to this operation since it is not located in the Denver 1-hr ozone non-attainment area. See discussion regarding this requirement on page 4.
- Particulate Matter emission limits have been added to the permit as discussed on page 5. These have been overlooked in the past and AFCO has now requested the emission limits be added to the permit. In spite of this, this does not represent a true increase in emissions.
- HAP limits have been added to the permit as discussed on page 5. These have been added to ensure that the facility is considered a minor source of HAP emissions.
- A requirement to limit the use of coatings containing certain target HAPs (Cr, Pb, Mn, Ni, Cd) has been added to the permit. This is necessary to ensure that AFCO is not subject to NESHAP Subpart HHHHHH. If AFCO uses a coating product containing any target HAP, they will become subject to Subpart HHHHHH.
- The Regulation No. 7 disposal of VOC RACT requirement has been added to the permit as Condition 1.3. This Regulation No. 7 requirement applies state-wide.

Section II.2 – Shot Blast System

- The table and conditions have been rearranged to reflect current Division language and structure.
- The opacity requirements in section 2.3 have been altered slightly. These requirements more accurately reflect the opacity requirements of recently issued permits. A daily opacity observation is required.
- Condition 2.6 has been added to contain the CAM requirements. See the CAM discussion on page 3.

Section II.3 – Upset Conditions and Breakdowns, Section II.4 – Insignificant Activities, Section II.5 – Reporting, Section II.6 – Substitution for Manufacturer's Recommendations

- These conditions have been removed. The Division no longer includes these requirements in the Operating Permits.

Section III – Permit Shield

- The citation in the permit shield was corrected. The reference to Part A, Section I.B.43 was changed to Part A, Section I.B.44 and the reference to Part C, Section XIII was changed to Part C, Section XIII.B.

Section IV – General Conditions

- Added language from the Common Provisions (new condition 3). With this change the reference to “21.d” in Condition 20 (prompt deviation reporting) will be changed to “22.d”, since the general conditions are renumbered with the addition of the Common Provisions.
- The upset language in Condition 3.d has been replaced with the affirmative defense provision for excess emission during malfunctions language.
- Removed the upset and breakdown provisions from Condition 4 (emergency provisions) since they are included in the Common Provisions.
- Condition 5 – “upset” was replaced with “malfunction”.
- The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from “Reg 1” to “Reg 9”.
- The definition of “prompt” has changed. Condition 21 has been updated.
- The language in 22d has been modified slightly.

Appendices

- Appendix B & C have been updated to the current version (02/20/2007). The requirement to determine if data was continuous has been removed from Appendix C. The term “upset” has been replaced with “malfunction”.
- The table in Appendix F has been cleared of past modifications.
- EPA’s mailing address in Appendix D has been changed.